



1/27

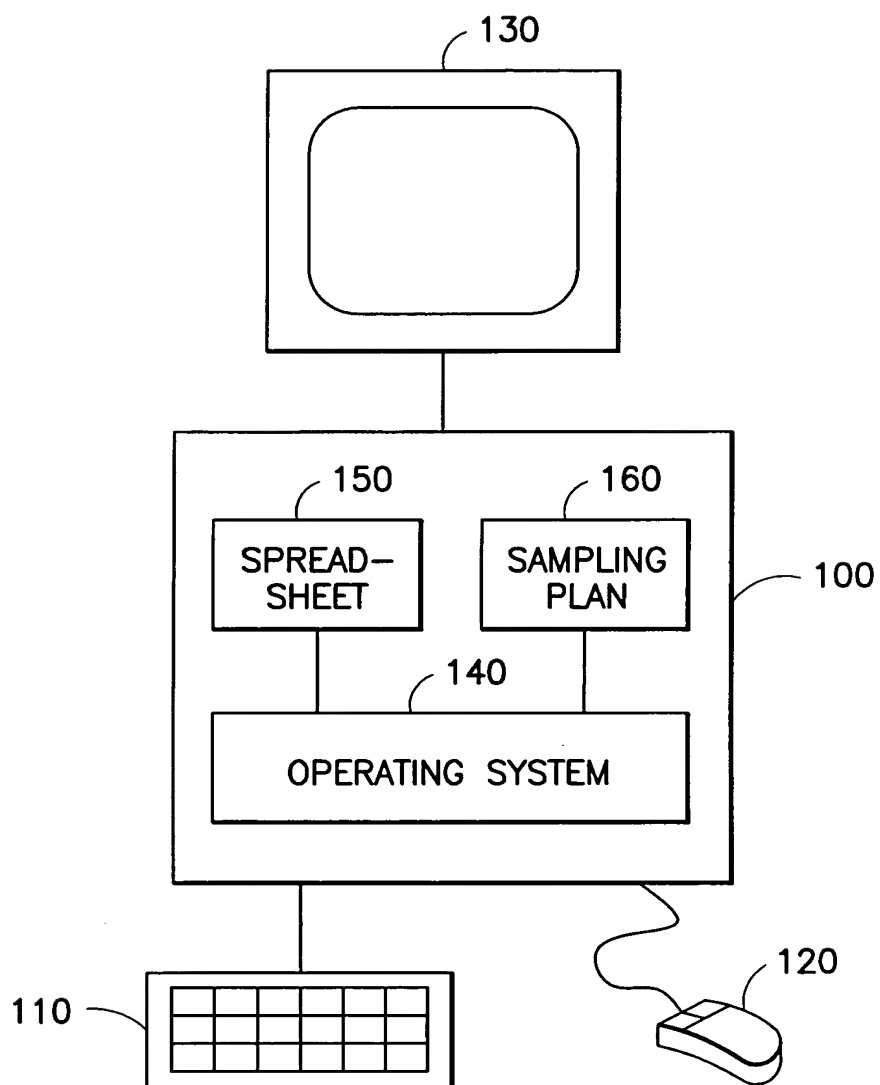


FIG. 1

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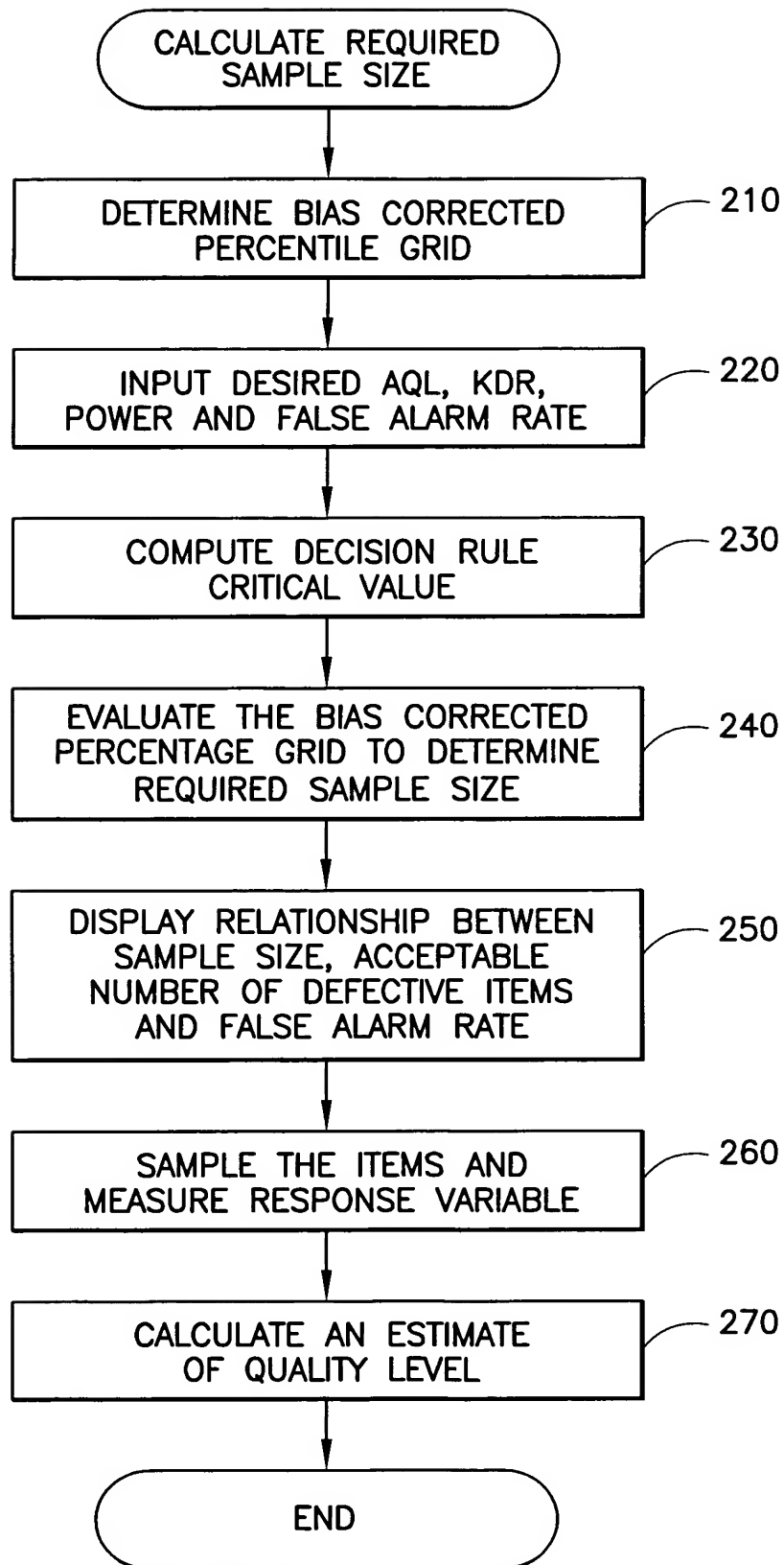


FIG.2

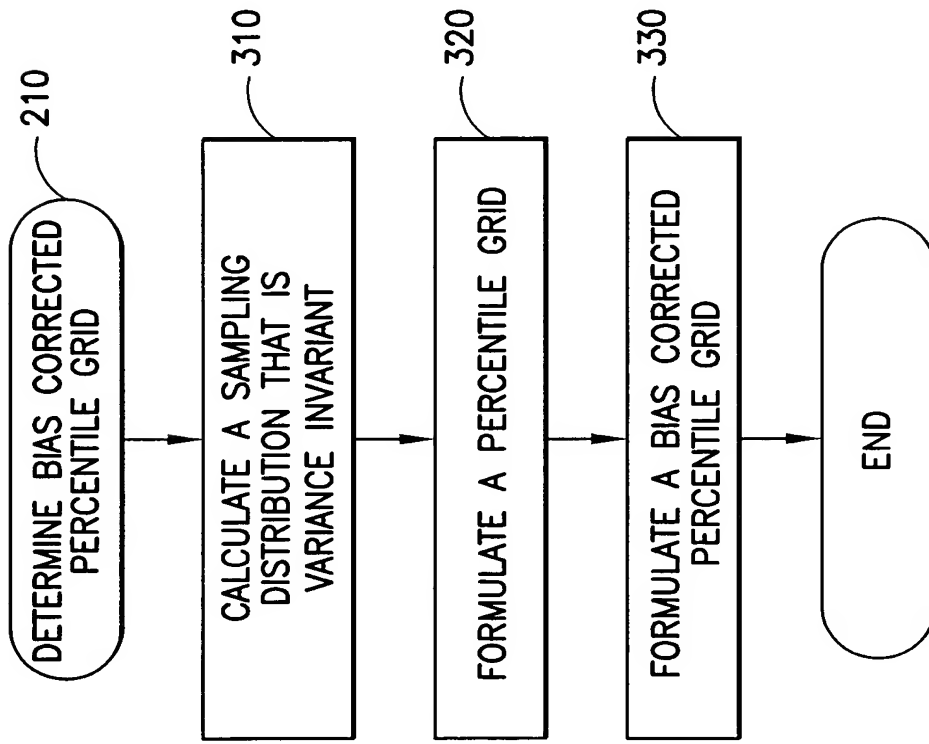


FIG.3

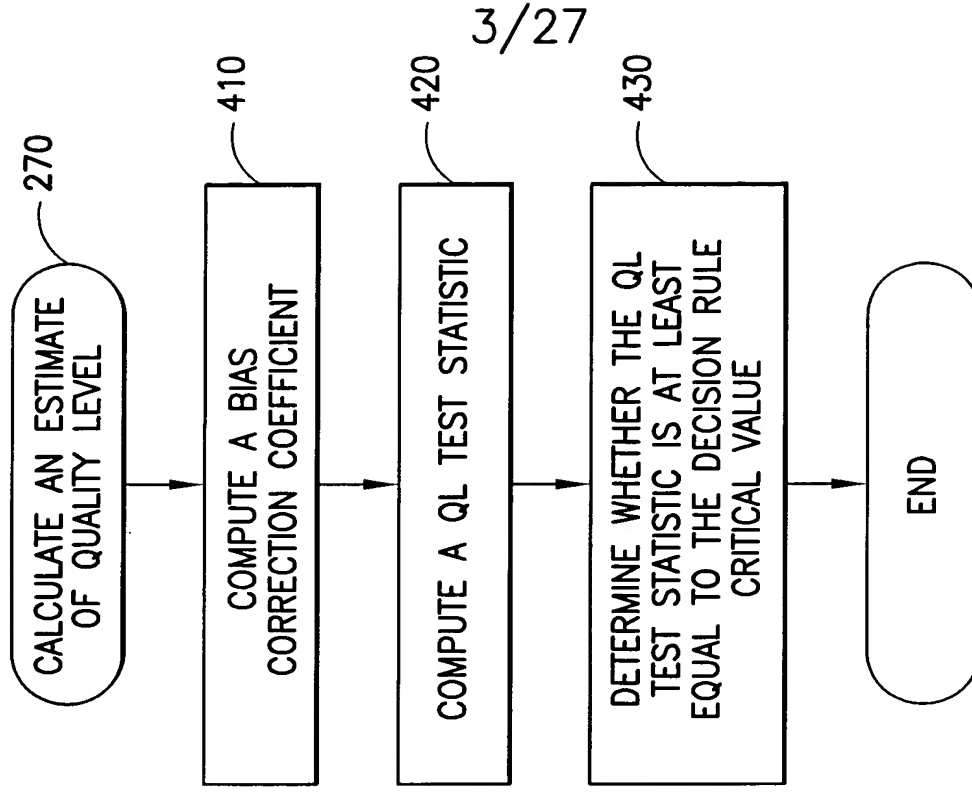


FIG.4

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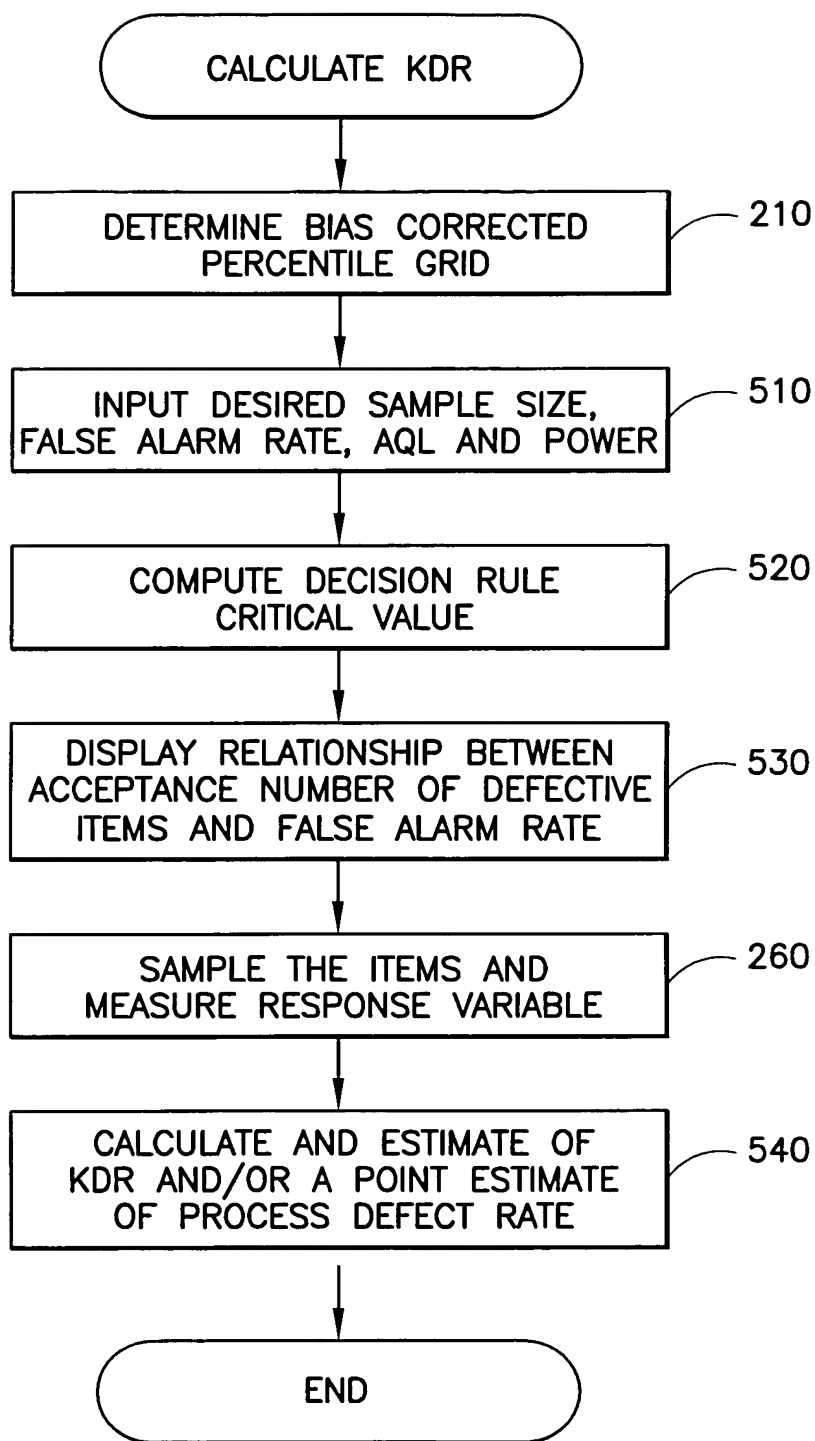


FIG.5

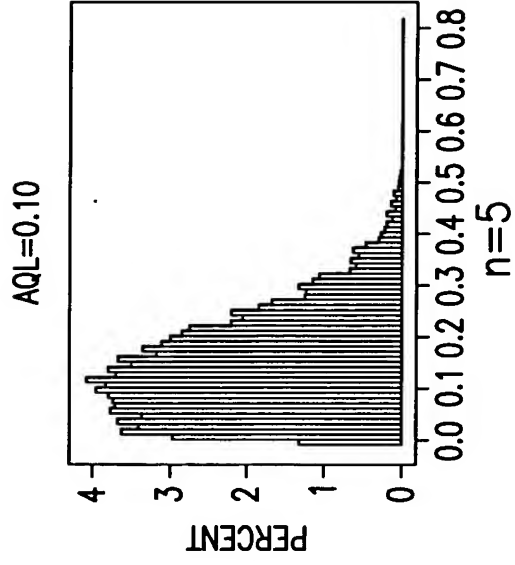


FIG. 6A

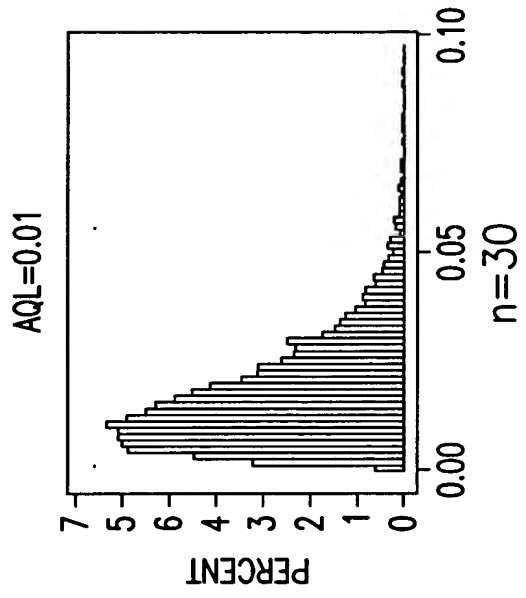


FIG. 6B

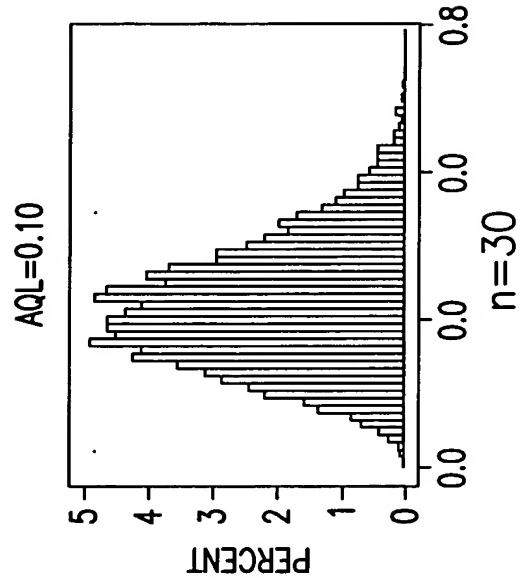


FIG. 6C

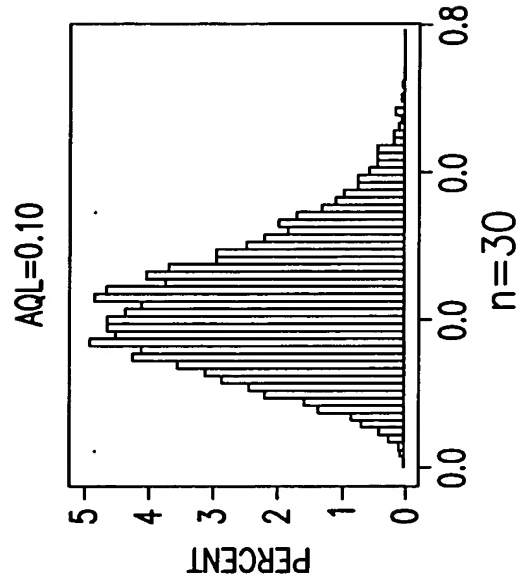


FIG. 6D

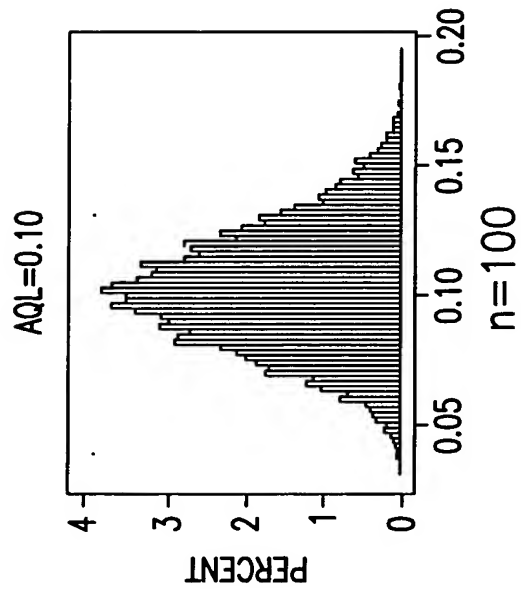


FIG.6F

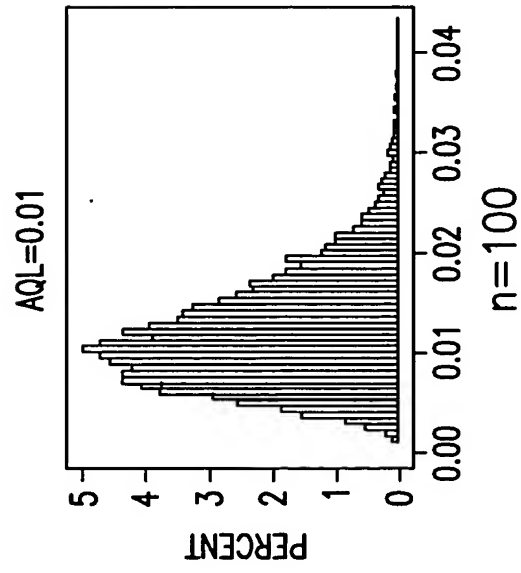


FIG.6E

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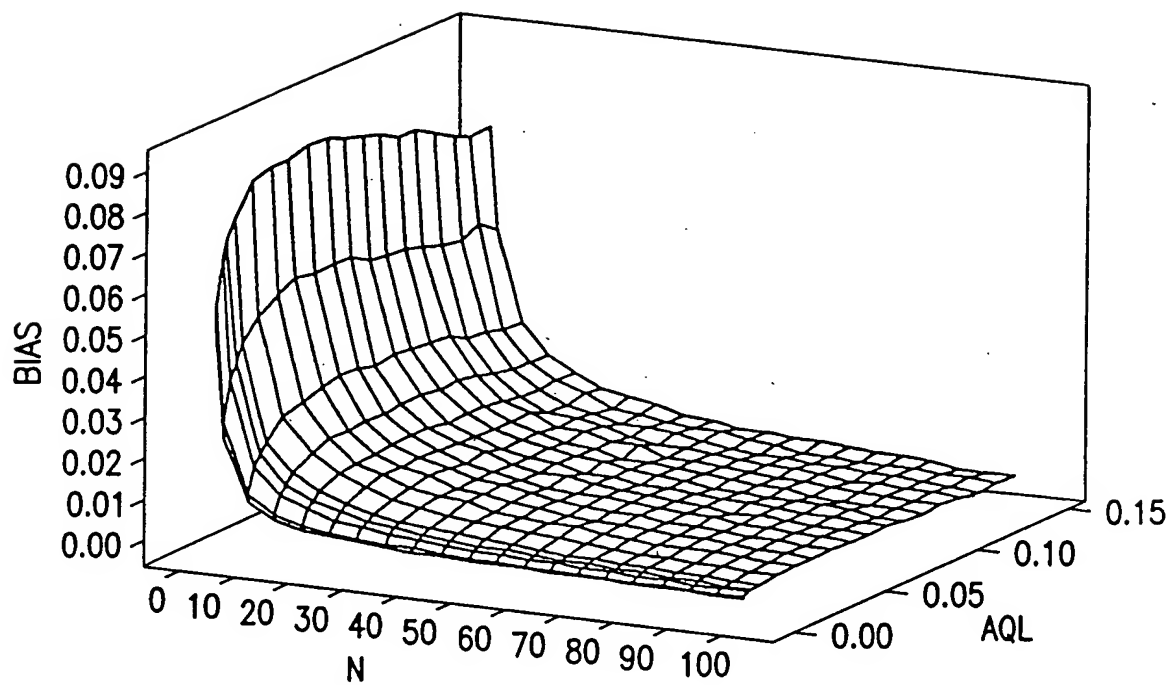


FIG.7

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BIAS CURVE, AQL=0.01

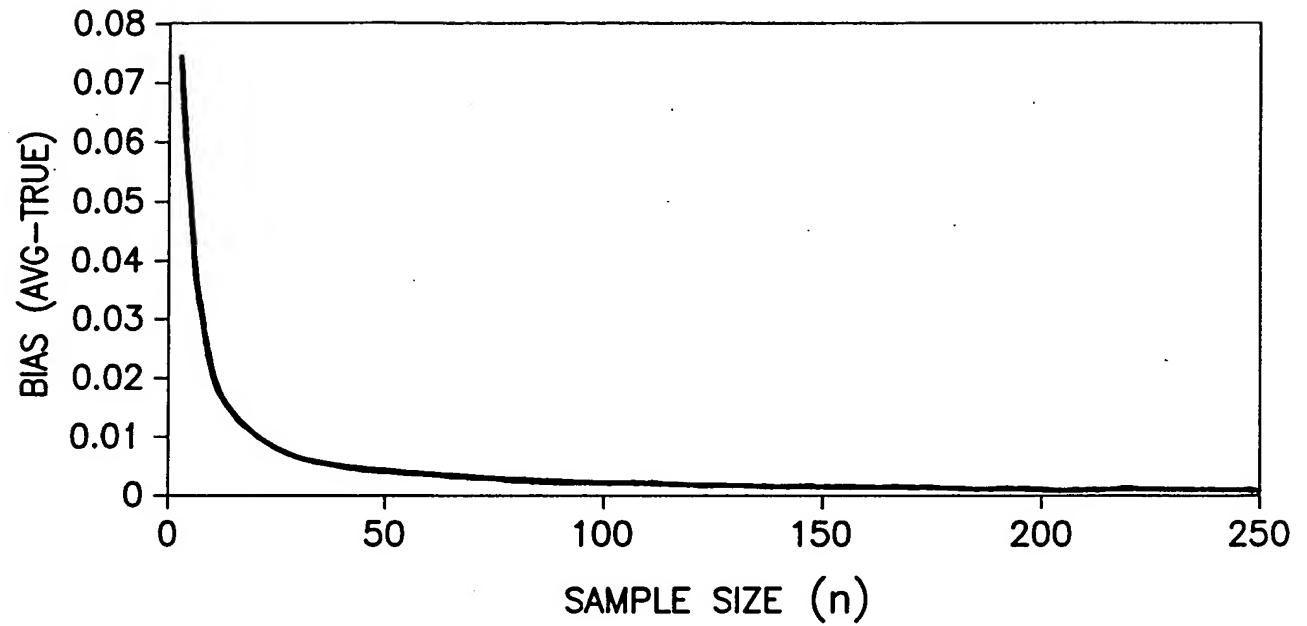


FIG.8A

BIAS CURVE, AQL=0.10

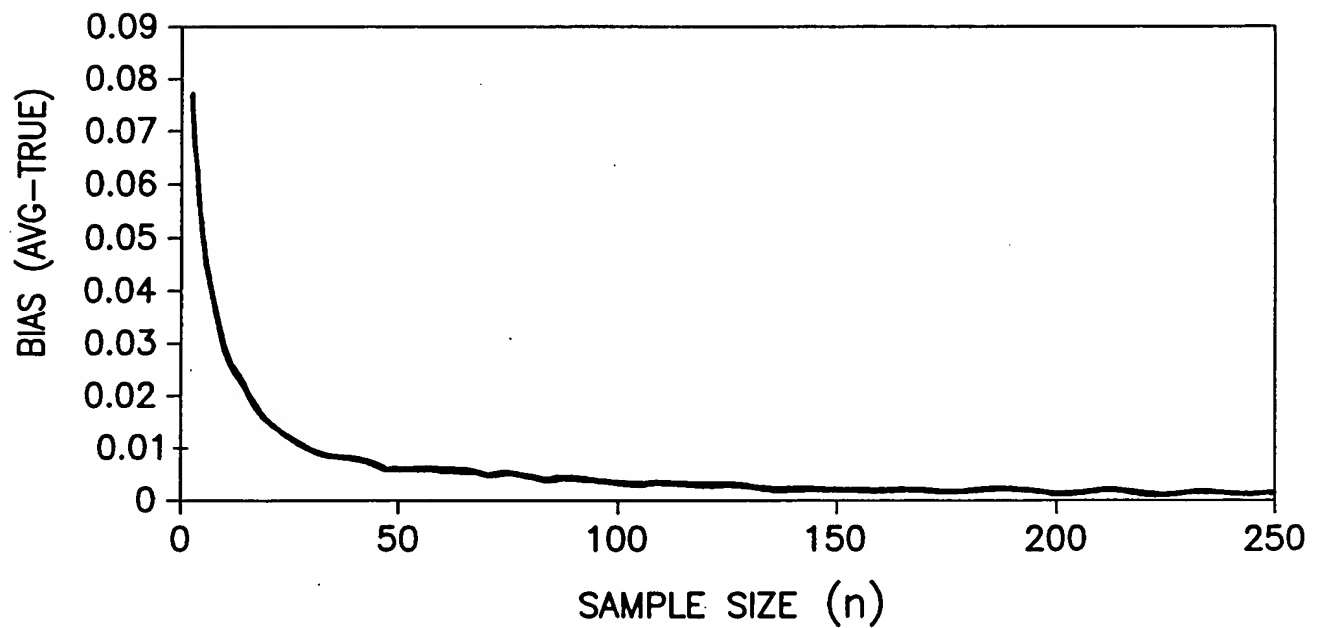
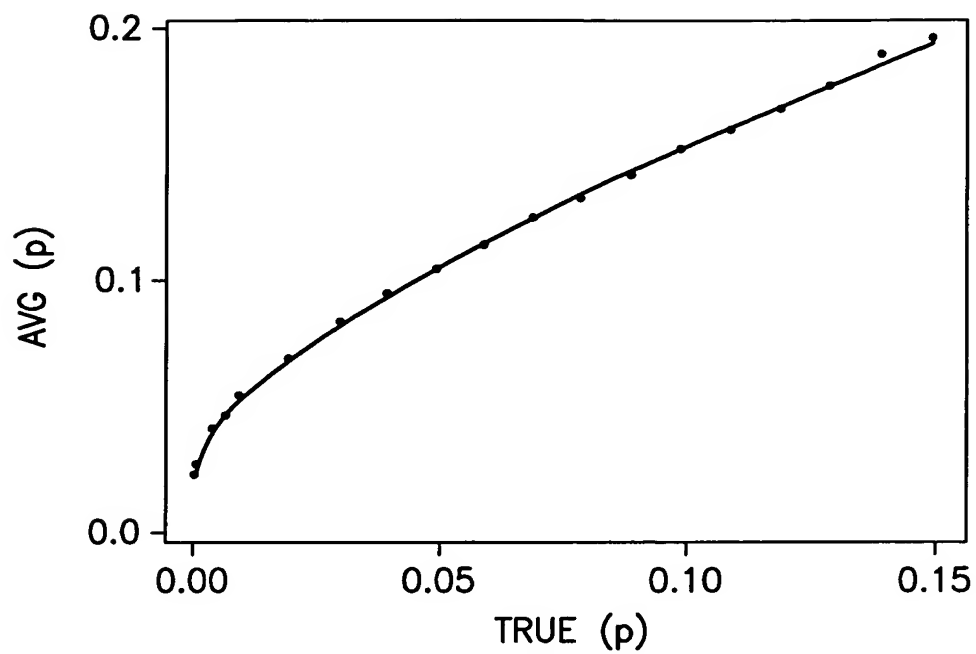


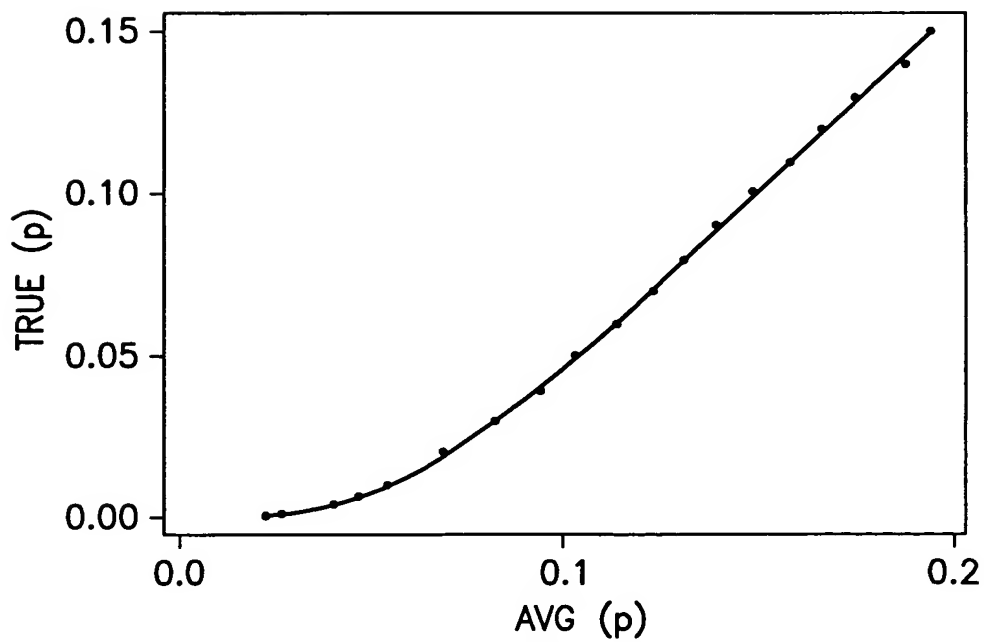
FIG.8B



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**FIG.9A**



**FIG.9B**



Desired KDR (%)

Required n

Error

under these conditions

c

Error

AQL [%]

Error

Target  $\alpha$  (%)

Error

True  $\beta$  error (%)

Error

True  $\alpha$  (%)

Error

check

OC & AOQ Curves

Plot Controls

USE F9 KEY TO RECALCULATE SHEET

Maintaining the Key Defect Rate

Max Rate (%)

Max c

Target  $\alpha$  (%)

Use Ctrl 0 to Copy the 3 charts

Maintaining the Key Defect Rate

Type I Error,  $\alpha$  (%)

0% 20.0% 40.0% 60.0% 80.0% 100.0% 120.0%

Acceptable Number of Defectives, c

0%

SETUP PROBLEM

Attributes

**FIG. 10B**



**FIG. 11B**

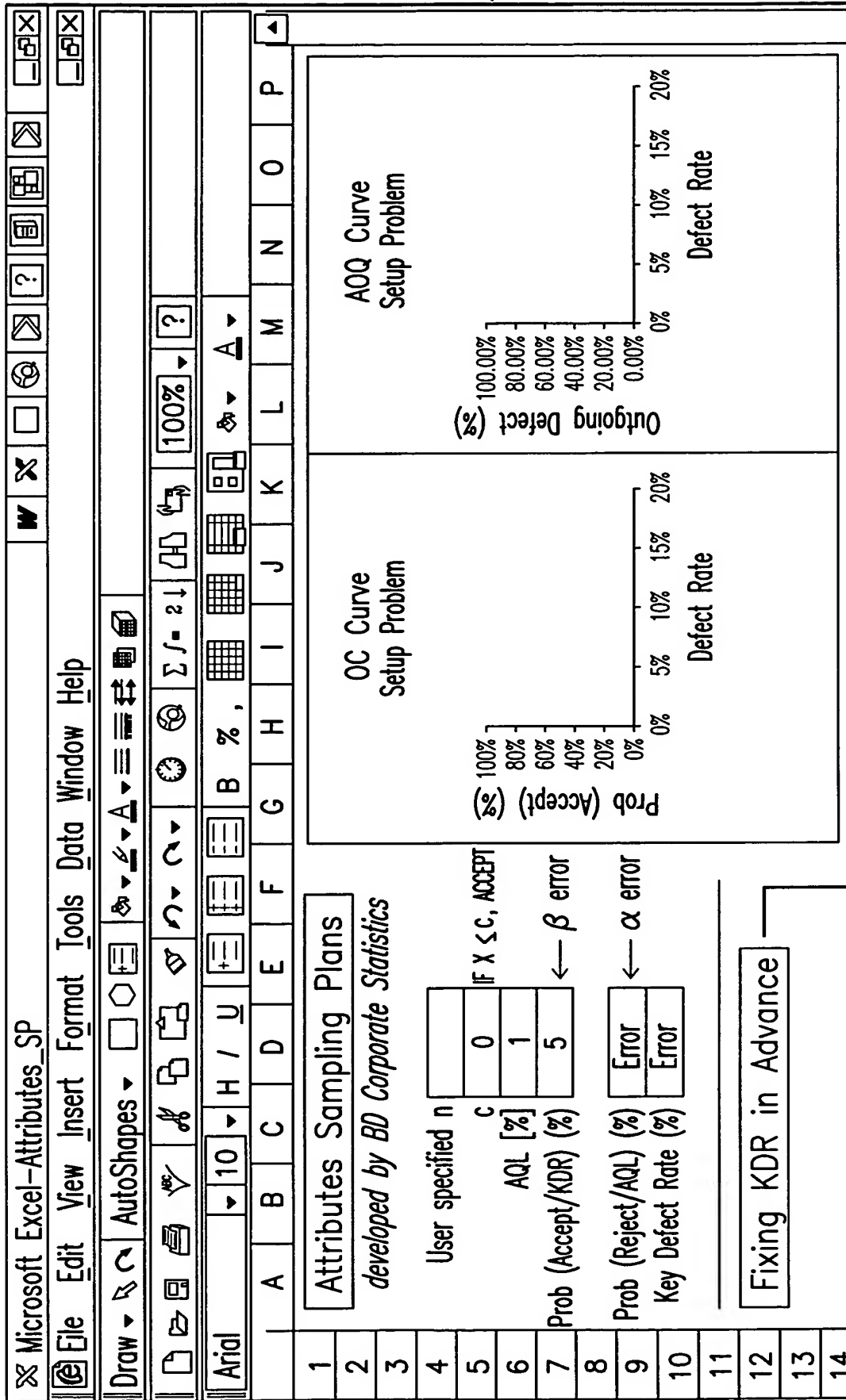


FIG. 12A

FIG. 12B

15	Desired KDR (%)	3
16	Required n	99
17	under these conditions	
18		
19		
20	c	0
21	AQL [%]	1.00
22	Target $\alpha$ (%)	10.00
23	True $\beta$ error (%)	4.90
24	True $\alpha$ (%)	63.03
25		
26	USE F9 KEY TO RECALCULATE SHEET	
27	Plot Controls	
28	OC & AOQ Curves	
29	Max Rate (%)	
30	Maintaining the Key Defect Rate	
31	15	Max c
32		Target $\alpha$ (%)
33		10
34	Use Ctrl 0 to Copy the 3 charts	
35		
36		

**Maintaining the Key Defect Rate**

Target: KDR=3% with at least 95% power: AQL=1%

Recommendation:  
Type I Error is 10.15%  
at n=392 & c=6

Acceptable Number of Defectives, c	Type I Error, $\alpha$ (%)
0	99
1	167
2	208
3	267
4	303
5	348
6	392
7	436
8	478
9	521
10	562
11	604
12	645
13	686
14	726
15	766

Attributes
Ready

FIG.12B





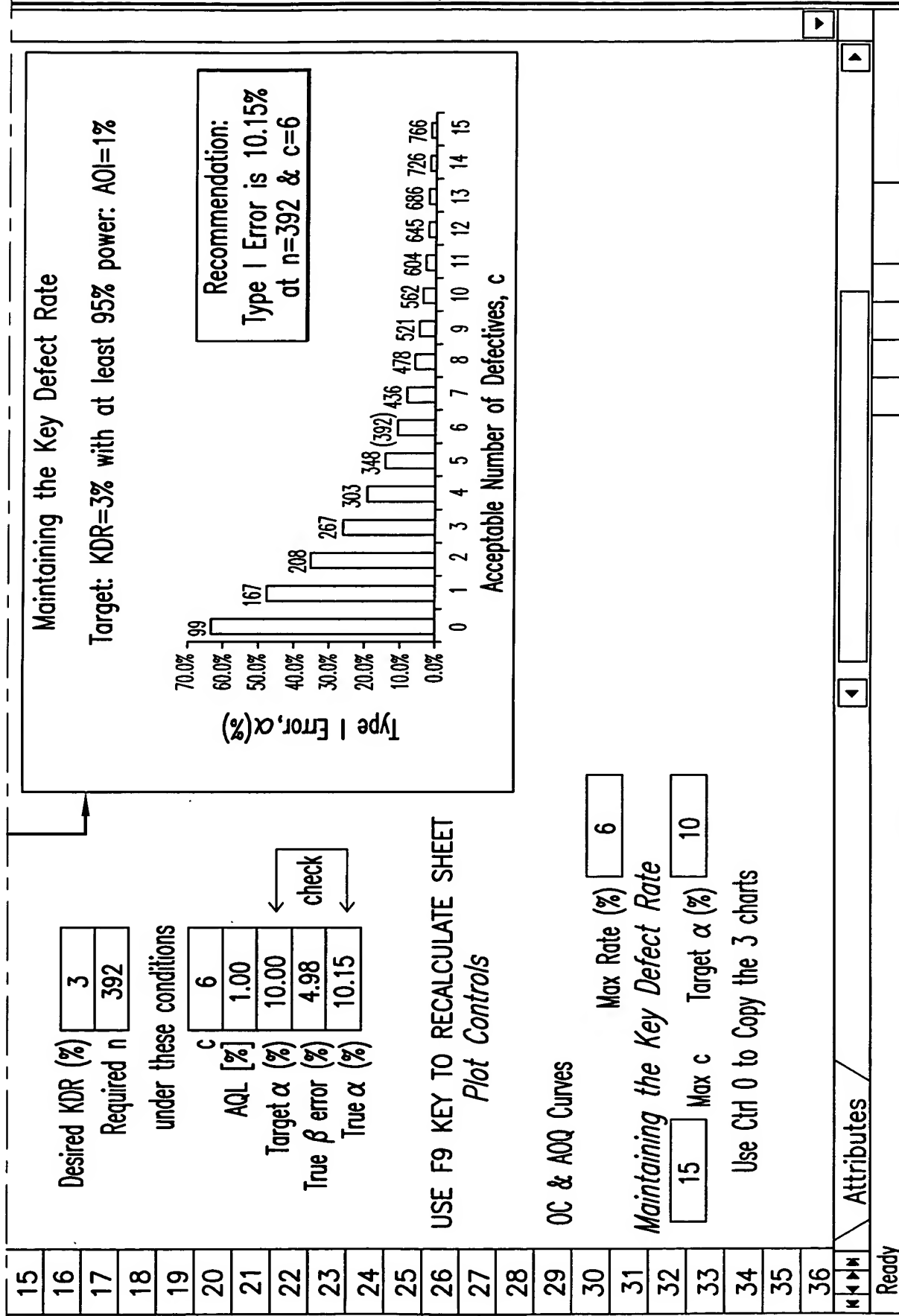
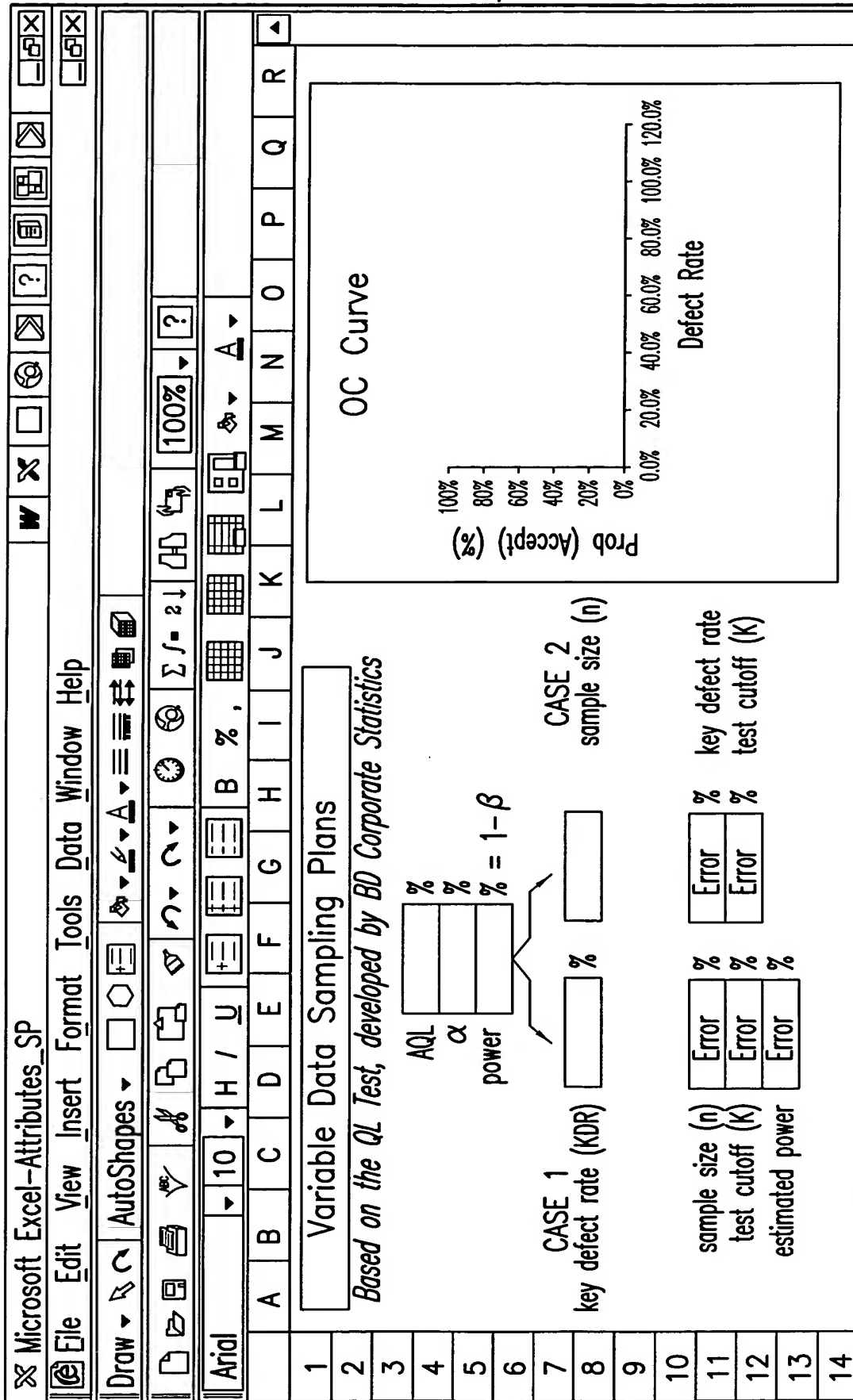


FIG.13B



**FIG. 14A**

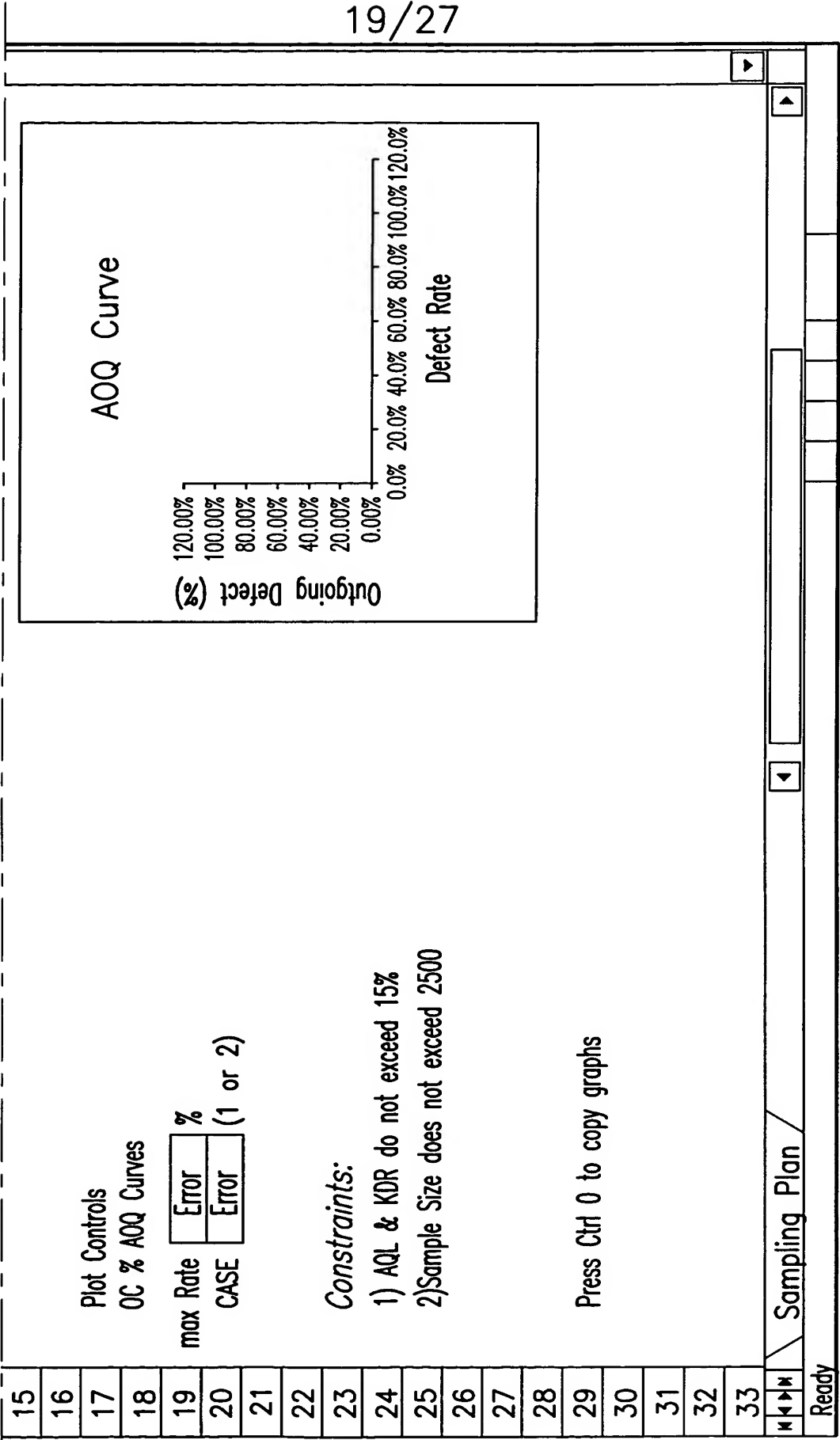


FIG.14B



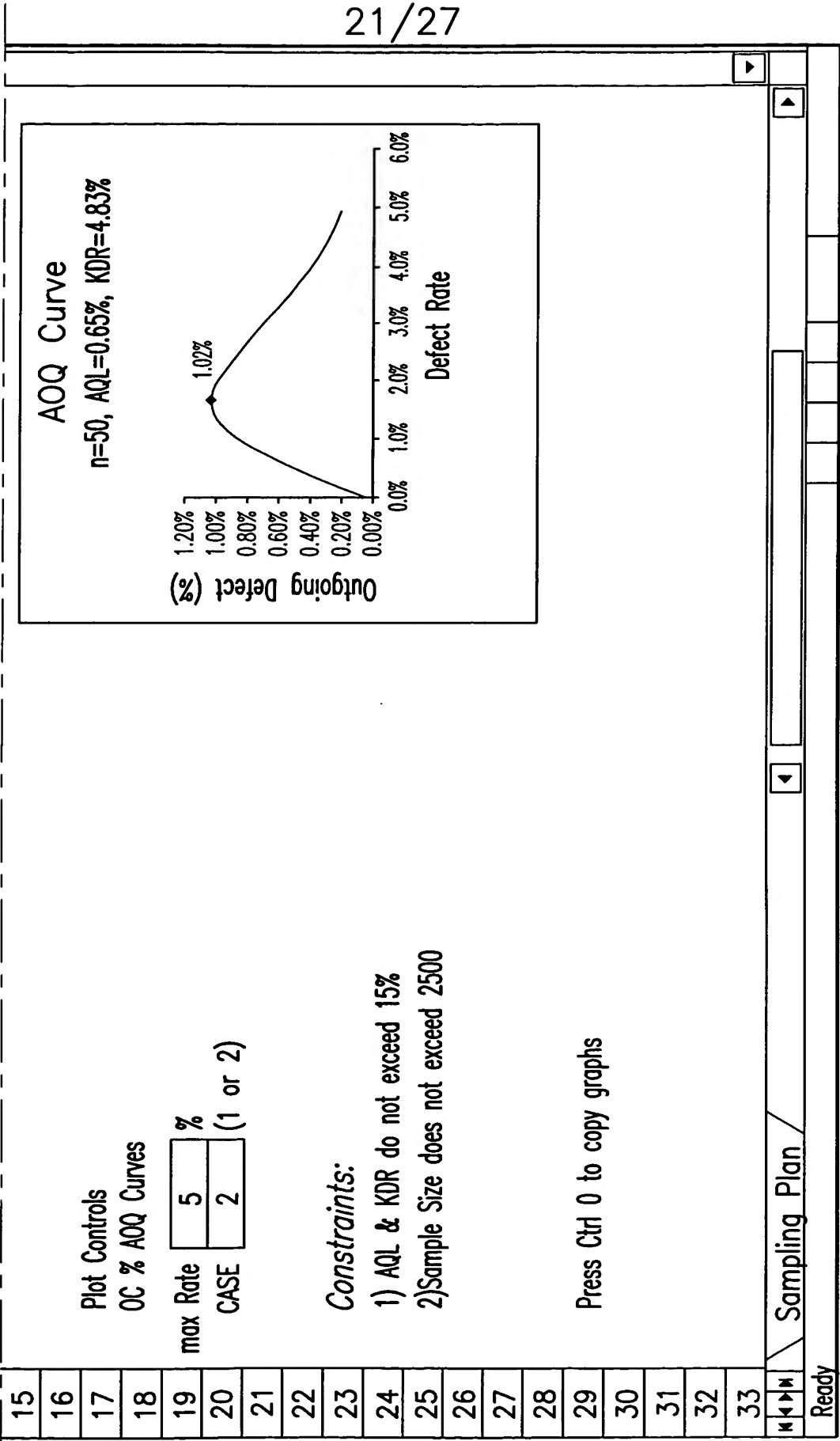


FIG.15B

Microsoft Excel-Attributes\_SP

File Edit View Insert Format Tools Data Window Help

Draw ▾

AutoShapes ▾

Σ f = 2 ↓

100%

?

Arial

10 ▾

H / U

B %

?

A B C D E F G H I J K L M N O P Q R

Variable Data Sampling Plans

Based on the QL Test, developed by BD Corporate Statistics

1 %

5 %

95 %

AQL

$\alpha$

power

%

%

$= 1 - \beta$

CASE 1

key defect rate (KDR)

3 %

CASE 2

sample size (n)

sample size (n)

174

test cutoff (K)

1.86 %

estimated power

95.05 %

Error

Error

%

%

key defect rate

test cutoff (K)

OC Curve

n=174, AQL=1%, KDR=3%

1- $\alpha$

$\beta$

Prob (Accept) (%)

Defect Rate

FIG.16A

FIG.16B

FIG.16A

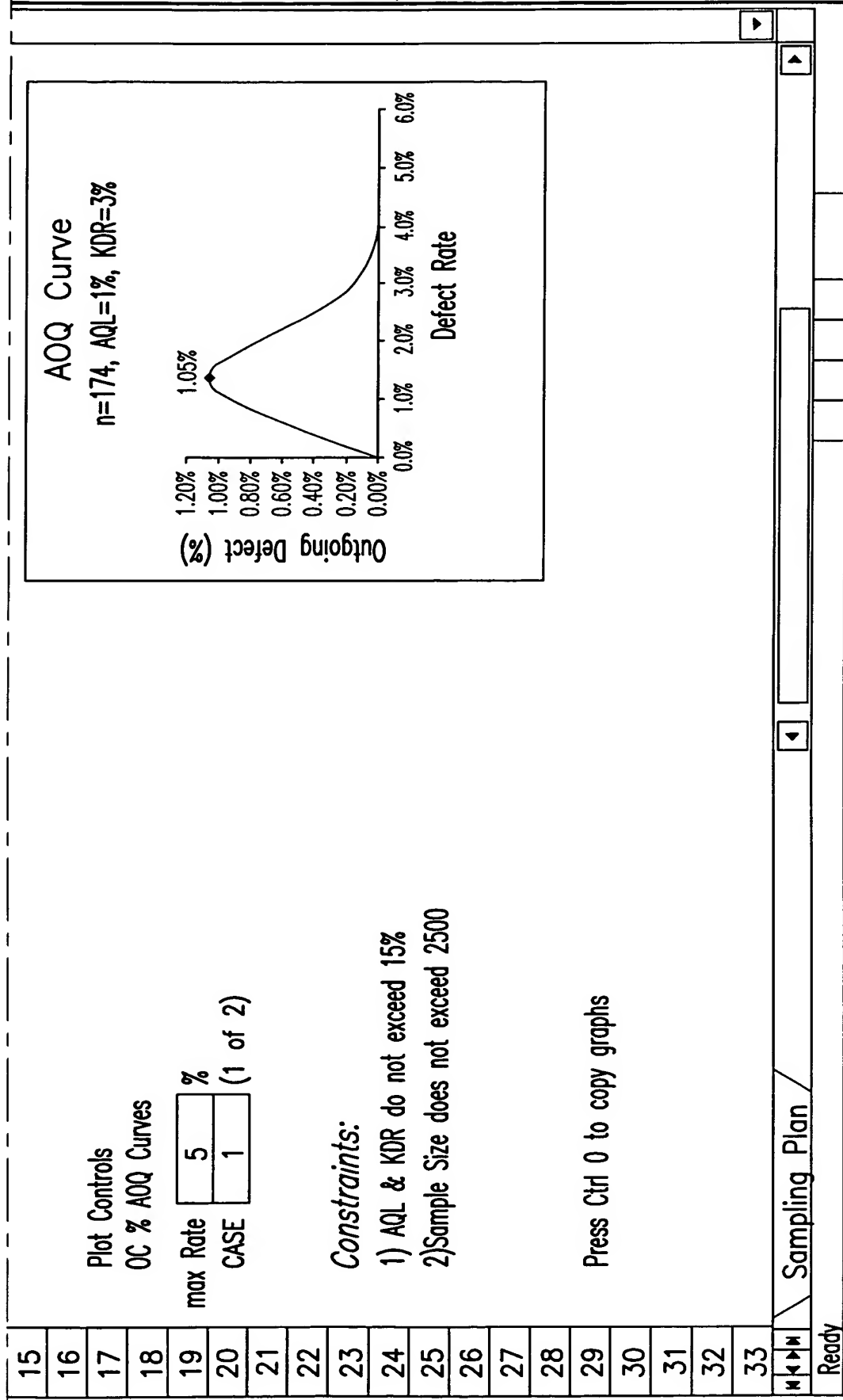


FIG.16B





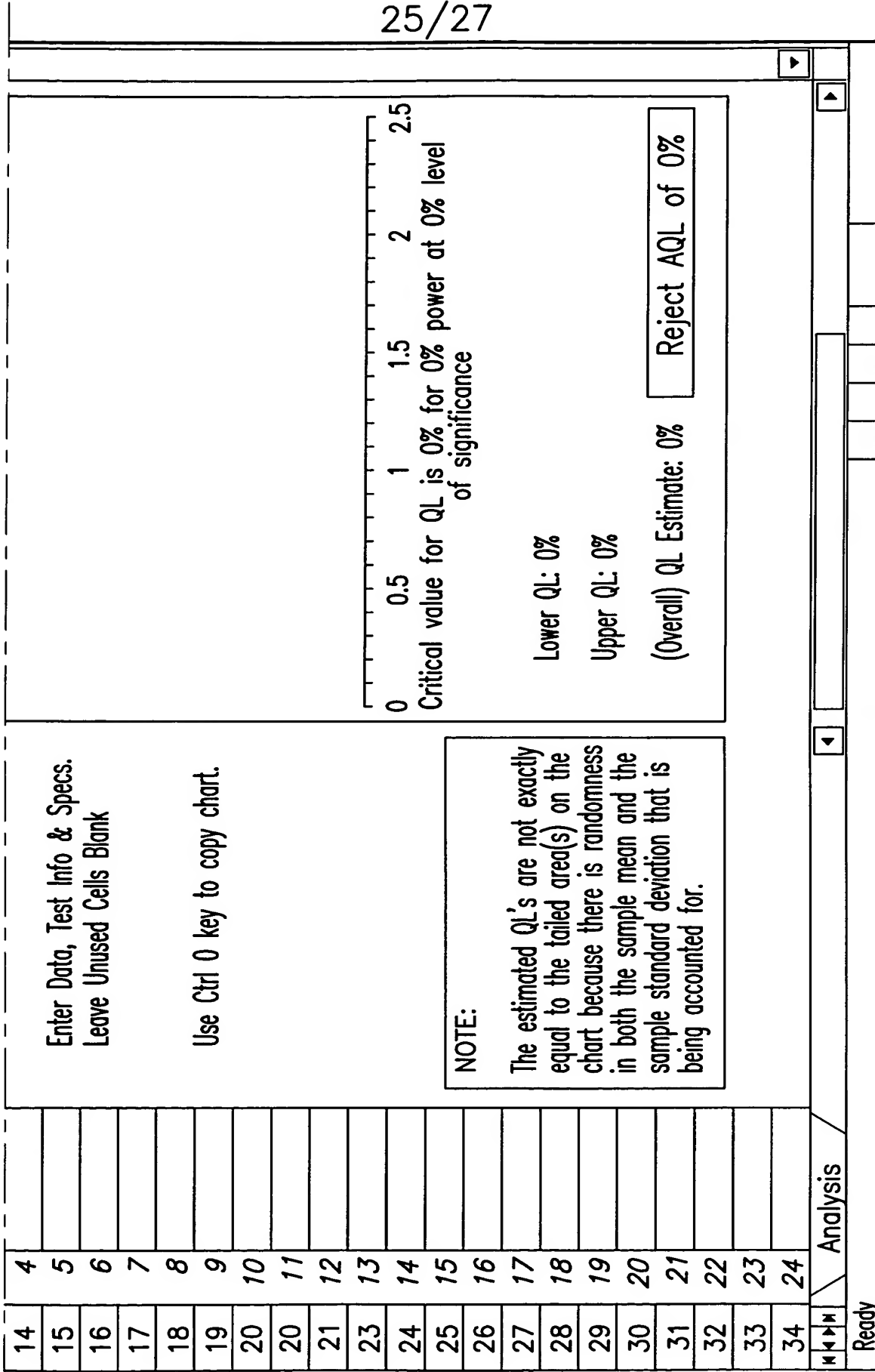


FIG.17B



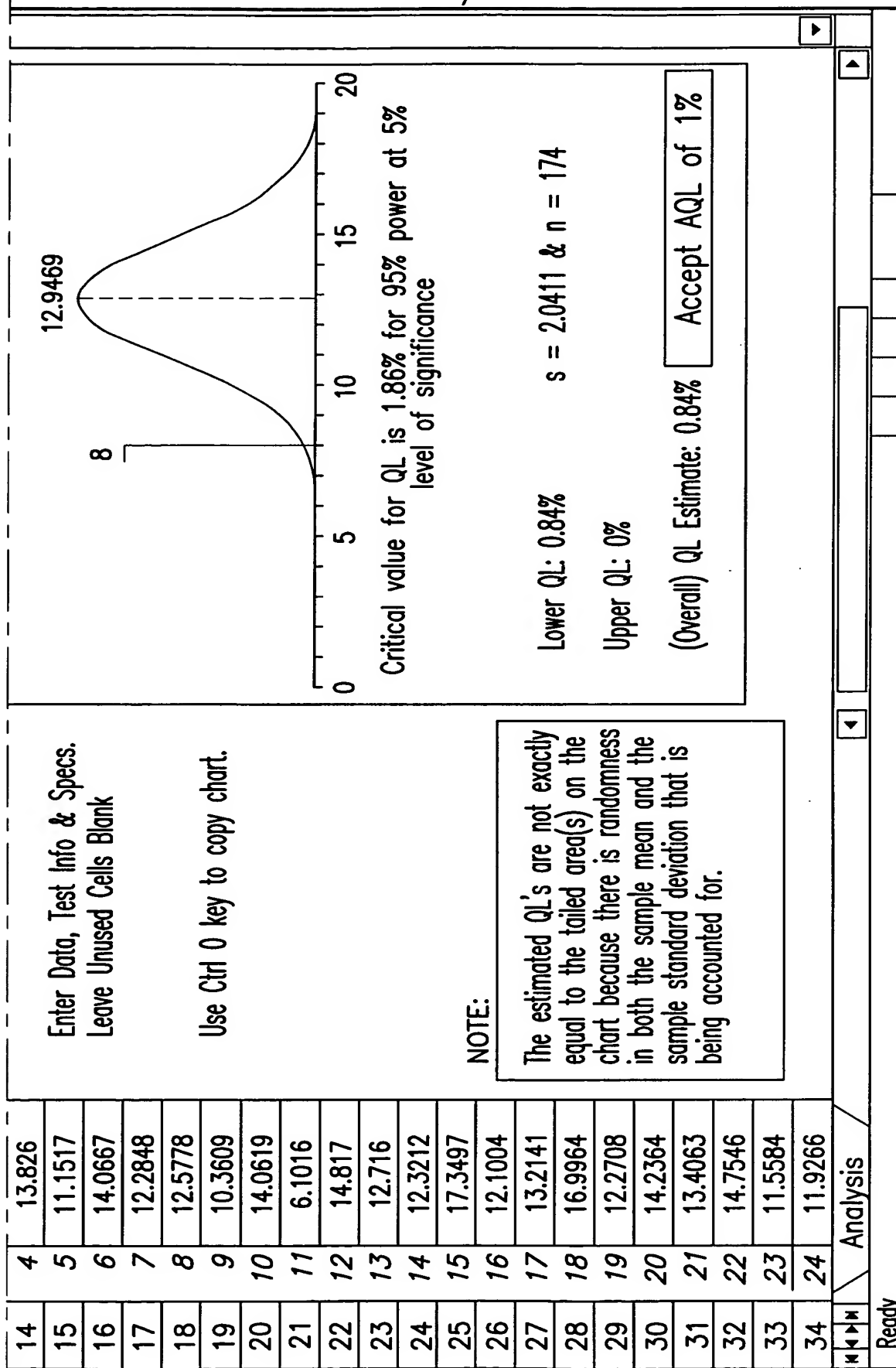


FIG.18B